LITHOS

AN INTERNATIONAL JOURNAL OF
MINERALOGY, PETROLOGY
AND GEOCHEMISTRY

EDITORS: W. L. GRIFFIN
B. JENSEN

VOLUME 16 · 1983

UNIVERSITETSFORLAGET · OSLO

© Universitetsforlaget 1983

Printed in Sweden by Berlings, Arlöv 1983

Contents

1 Ozawa, K.: Relationships between tectonite and cumulate in ophiolites: the Miyamori ultramafic complex, Kitakami Mountains, northeast Japan

17 Isuk, E. E.: Behavior of molybdenum in alkali silicate melts: Effects of excess SiO_2 and CO_2

23 Pe-Piper, G.: Triassic shoshonites and andesites, Lakmon Mountains, western continental Greece: Differences in primary geochemistry and sheet silicate alteration products

35 Sauniac, S. & Touret, J.: Petrology and fluid inclusions of a quartz-kyanite segregation in the main thrust zone of the Himalayas

47 Patchett, P. J.: Hafnium isotope results from mid-ocean ridges and Kerguelen

53 Lapin, A. V. & Vartiainen, H.: Orbicular and spherulitic carbonatites from Sokli and Vuorijärvi

61 Claesson, S. & Roddick, J. C.: $^{40}Ar/^{39}Ar$ data on the age and metamorphism of the Ottfjället dolerites, Särv Nappe, Swedish Caledonides

75 Clarke, D. B. & Pe-Piper, G. G.: Multiply exsolved clinopyroxene megacrysts from the Frank Smith Mine, Cape Province, South Africa

85 Krill, A. G.: Rb–Sr study of dolerite dikes and psammite from the Western Gneiss Region of Norway

95 Maccarrone, E., Paglionico, A., Piccarreta, G. & Rottura, A.; Granulite-amphibolite facies metasediments from the Serre (Calabria, Southern Italy): their protoliths and the processes controlling their chemistry

113 Sills, J. D.: Mineralogical changes occurring during the retrogression of Archaean gneisses from the Lewisian complex of NW Scotland

125 Iwasaki, R. & Aoki, Y.: Growth of twinned magnetite crystals in talc and talc-magnesite rock at Torika, Nagasaki Prefecture, Japan

135 Marcelot, G., Maury, R. C. & Lefevre, C.: Mineralogy of Erromango lavas (New Hebrides): Evidence of an early stage of fractionation in island arc basalts

153 Smith, R. K. & Lofgren, G. E.: An analytical and experimental study of zoning in plagioclase

169 Bussell, M. A.: Crystallization history of granophyric intrusives from the Peruvian Coastal Batholith

185 Tindle, A. G. & Pearce, J. A.: Assimilation and partial melting of continental crust: evidence from the mineralogy and geochemistry of autoliths and zenoliths

203 DeVore, G. W.: The influence of submarine weathering of basalts on their partial melting during subduction

215 Larsen, L. M., Rex, D. C. & Secher, K.: The age of carbonatites, kimberlites and lamprophyres from southern West Greenland: recurrent alkaline magmatism during 2500 million years

223 Glover, L., III, Speer, J. A., Russell, G. S. & Farrar, S. S.: Ages of regional metamorphism and ductile deformation in the central and southern Appalachians

249 Akizuki, M.: An electron microscopic study of anorthoclase spherulites

255 DeVore, G. W.: Relations between subduction, slab heating, slab dehydration and continental growth

265 Drexler, J. W., Bornhorst, T. J. & Noble, D. C.: Trace-element sanidine/glass distribution coefficients for peralkaline silicic rocks and their implications to peralkaline petrogenesis

273 Sheraton, J. W. & Black, L. P.: Geochemistry of Precambrian gneisses: relevance for the evolution of the East Antarctic Shield

297 Welin, E., Vaasjoki, M. & Suominen, V.: Age differences between Rb-Sr whole rock and U-Pb zircon ages of syn- and postorogenic Svecokarelian granitoids in Sottunga, SW Finland

307 Daly, J. S., Park, R. G. & Cliff, R. A.: Rb–Sr isotopic equilibrium during Sveconorwegian (= Grenville) deformation and metamorphism of the Orust dykes, S.W. Sweden

319 Wickman, F. E.: Uranium-lead systematics. The case of crystals with discrete cores

325 Harvey, M. A.: A geochemical and Rb-Sr study of the Proterozoic augen orthogneisses on the Molde peninsula, west Norway

Index of Contributors

Akizuki, M. 249
Aoki, Y. 125
Black, L. P. 273
Bornhorst, T. J. 265
Bussell, M. A. 169
Claesson, S. 61
Clarke, D. B. 75
Cliff, R. A. 307
Daly, J. S. 307
DeVore, G. W. 203, 255
Drexler, J. W. 265
Farrar, S. S. 223
Glover, L. III 223
Harvey, M. A. 325
Isuk, E. E. 17
Iwasaki, R. 125
Krill, A. G. 85
Lapin, A. V. 53
Larsen, L. M. 215
Lefevre, C. 135
Lofgren, G. E. 153
Maccarrone, E. 95
Marcelot, G. 135
Maury, R. C. 135
Noble, D. C. 265
Ozawa, K. 1
Paglionico, A. 95
Park, R. G. 307
Patchett, P. J. 47
Pearce, J. A. 185
Pe-Piper, G. 23, 75
Piccarretta, G. 95
Rex, D. C. 215
Roddick, J. C. 61
Rottura, A. 95
Russell, G. S. 223
Sauniac, S. 35
Secher, K. 215
Sheraton, J. W. 273
Sills, J. D. 113
Smith, R. K. 153
Speer, J. A. 223
Suominen, V. 297
Tindle, A. G. 185
Touret, J. 35
Vaasjoki, M. 297
Vartiainen, H. 53
Welin, E. 297
Wickman, F. E. 319